

ABSTRACT OF THE DISCLOSURE

Various state amounts of a vehicle body detected by various types of sensors are captured (step 102). A maximum frictional force $F_{i\max}$ is calculated for each of wheels (steps 104 to 110). By use of the maximum frictional force $F_{i\max}$ and other physical quantities, a performance function not dependent on respective magnitudes of a vehicle body generating force and a yaw moment is defined, which performance function is prepared by means of a performance function in a case in which the vehicle body generating force is larger than the yaw moment, and a performance function in a case in which the vehicle body generating force is not larger than the yaw moment (step 112). A resultant force q_i of tire generating forces acting on respective wheels is calculated by means of a third performance function (step 114), and braking and driving forces of each wheel, and a steering angle of each wheel are obtained by means of the calculated direction in which the resultant force of tire generating forces acts on the wheels (step 116). Based on the obtained braking and driving forces and steering wheel of each of the wheels, these wheels are each controlled (step 118).